User Guide
DisplayMark 2

Version 2.0

Overview:

The DisplayMark 2 is a monitoring system that watches the temperature, the backlight (inverter), and green status LED (video). It places a small white block in the lower right corner of the screen, which is monitored by an ambient light sensor. The light sensor reads the white block value and then replaces the white block with a black block which it reads. If there is a problem with any of these tests, i.e (video, temperature, or controller) the DisplayMark 2 will notify the end user either with a message on either the serial port or through the network port of the SVX.

The DisplayMark 2 controller works only as an add-on to the Digital View SVX-1920 display controller with custom firmware installed **E0.41.00** or higher.

General Hardware Setup:

The DisplayMark2 is wired in as follows:

1. Plug the DisplayMark 2 into CN8 of the SVX -1920, (the 6 pin JST connector).
2. See the attached diagram for connecting the DM2 with the SVX-1920.
   a. DisplayMark 2 (pin1) connects to inverter enable pin 3 of CNB1
   b. DisplayMark 2 (pin2) connects to the SVX-1920 LED 1 pin 1
   c. DisplayMark 2 (pin4) is RS232 out
   d. DisplayMark 2 (pin5) is ground
   e. DisplayMark 2 (pin6) is RS232 in
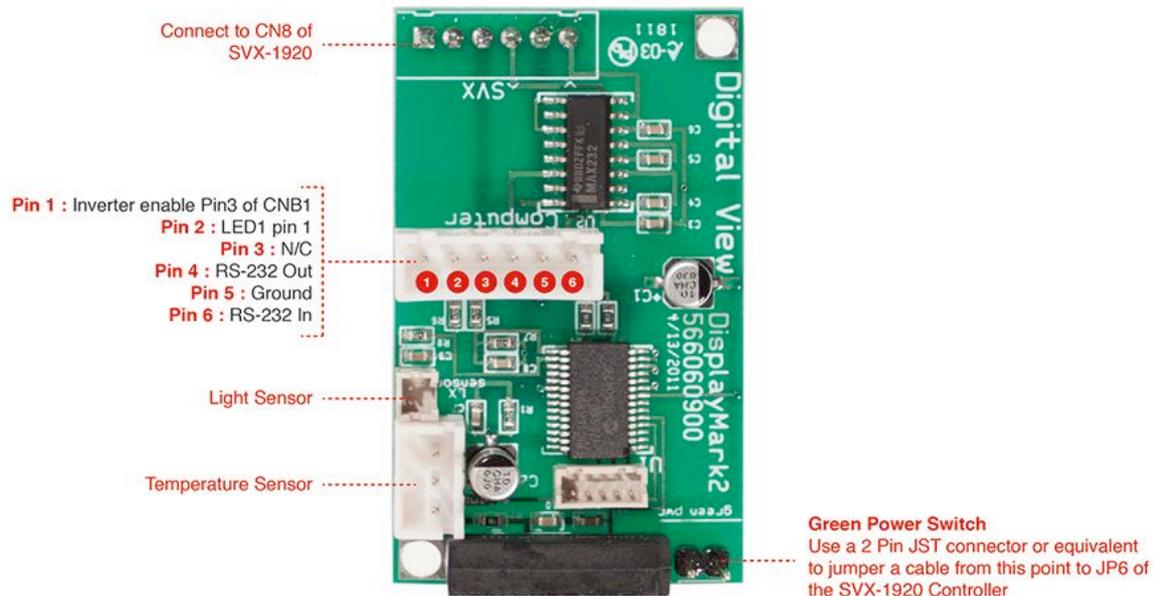
3. Light sensor – Use cable PN#426005800-3
4. Temperature sensor – Use cable PN#426004900-3
5. Green power switch – No cable available

General Software Requirements:

1. 1. PC configuration: 2400 baud 8 N 1
2. 2. Software Serial Utility programs (i.e Access Port, Comport tool kit, Realterm, etc…)
3. 3. IP locator
4. 4. A TCP/IP network software or a "Virtual" RS232 serial port program (such as TCP-Comp) that allows you to use existing Windows based serial communications software to send and receive data across a TCP/IP network.

DisplayMark 2 Software Setup:

Note 1: The DisplayMark 2 comes "pre-loaded" with default values such as name and assorted parameters. In order to change these parameters a list of commands are provided. Follow the DM2

Setting DisplayMark 2 parameters:

Make sure to have a serial utility program opened before proceeding. When you turn on the system, the DisplayMark 2 should identify itself, along with the values that exist in the eeprom. It will do a white/ black block test and temperature read every 30 seconds. The following message would appear.

"Copyright 2011 by Digital View, DisplayMark2 ver.R.".

If you see the above message, proceed with the commands listed below. If no message appears then there is a serial communication problem. Verify the serial cable and/or the serial program settings.

DM2 serial commands:

vd = diagnostic mode
vr = (record ID)
vs = DisplayMark 2 status
vt = time Interval
vm = temperature setting
vx = Lx value setting
vp = turn on or off the SVX

Definition of serial commands:

Note 3: **All commands are in lower case!**

vd = To monitor the values of the light sensor and the temperature, you will want to set the DisplayMark 2 into the "diagnostic mode". Type **"vd"** (data or diagnostic) It will reply "**Enter d + 1" 1 (on) or 0 for (off).** When this mode is on, it will report LX and LXb (black), video ON, inverter ON, green LED ON, and temperature. Once you set the values you desire, you can either set the "d mode" to "0" or just turn the entire unit off which will cancel the diagnostic mode.

vr = To record a new name into the DisplayMark 2 memory, type **"vr"** (record ID). It will reply with "**please enter r + 6 character or numbers**". You type "**r**" and the desired name to be assigned to this unit. It will record that name into non volatile memory and will remain there until you decide to rename the unit.

vs = To find out what your values are, type **"vs"** The unit will report back the name(ID), set time, LX set, and temp set that are recorded in the non volatile memory.

vt = To change the report time, type **"vt"** (time). The unit will reply "Please enter t + 2 digit number (minutes), 98 for SVX reprogramming, 99 = no report. This means you can set up reporting to a max of 1 hour and 15 minutes. It will record that value into non volatile memory.

vm = sets the temperature pass / cutoff value. type **"vm".** The unit will reply "Please enter m + 2 digit temperature setting (temperature in C). If the temperature exceeds this value, it will report a problem.

vx = The light sensor value. type **"vx"** (Lx). The unit will reply "Please enter x + 2 digit numbers. When you're setting up the DM2 Lx values you should use a value midway between the two Lx and Lxb.

Example: If the levels you are reading for Lx are 100, set Lx value at 85. The Lxb value will be less than 20 and should be midway.

vp = To turn on or off the SVX, type **"vp"**. It will return "**Enter p + 1 for ON or p + 0 for OFF**. This operates both ways with the SVX through JP6 on the SVX board, using the 2 pin connection by the relay on the DisplayMark board or without the jumper.

Control Through The IP-50/Ethernet Port:

You will need three programs to test the DM2 through the IP-50 port (**IP locator** (see DV tech support)**, TCP-comp or similar,** and a serial protocol program such as **Access port**).

1. Make sure to have the SVX board connected to the network.

2. Using "**IP locator**" locate the IP address of the SVX controller. (See attached settings)

(5) Use "IP Locator" program to locate the IP address using IP-50 :
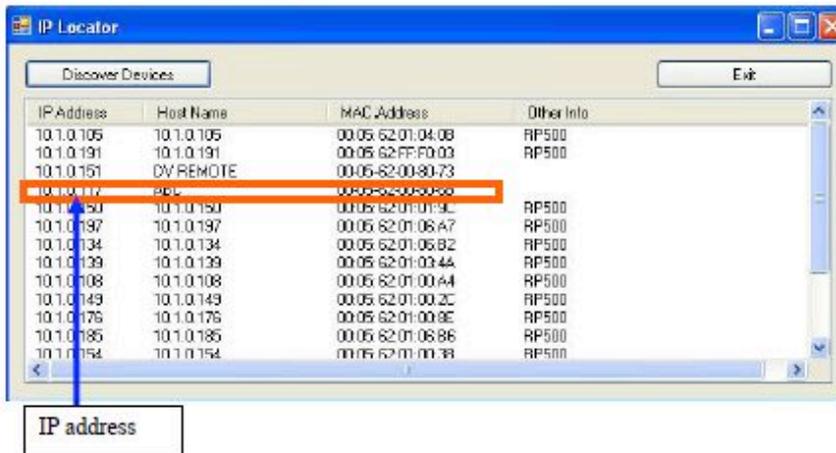
IP address

(6) Open the "TCP-Com" program and set the following settings and then click activate.
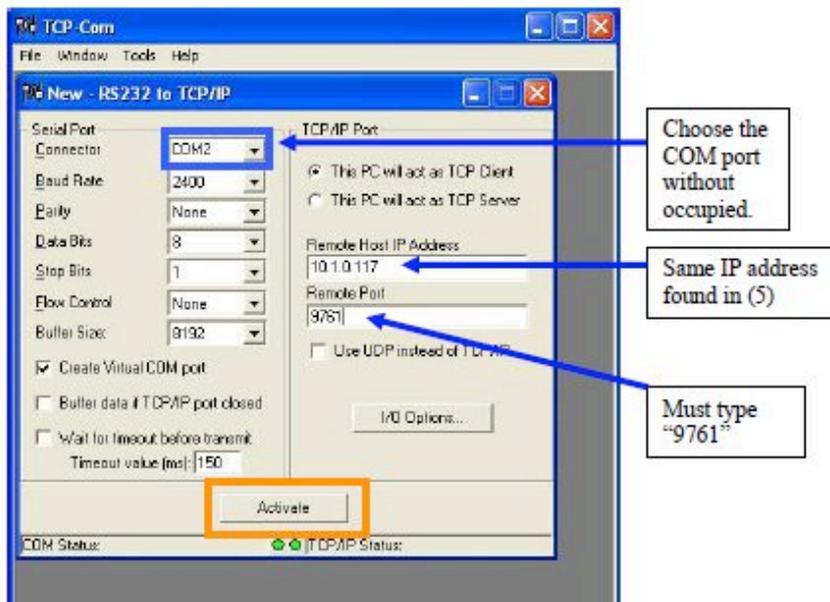
3. Setting up that IP address in the proper spot, and select a comm port that is not commonly used such as (6 or 7) to activate. Once you activate the port, minimize TCP-com.

4.Now setup "Access Port" by starting the program and select "tools" and then on the drop down menu select "configure". That will open a new box (General) set the port to the same comm port you activated on TCPcom, baud=2400, parity=NONE, data bits=8, stop bits=1, buffer=8192. Then press activate.

5.Now you should have Access Port in the terminal mode. To test quickly, on the bottom box, set it to HEX and type "**F7**" and then press "**send**". You should see the OSD menu come up on the SVX if all is working correctly.

6.If all is working correctly then send the following commands.

a.To Turn serial port OFF, type " **EE 64 7B 76 2D 7D"**   (v -)

b.To turn serial port ON, type **"EE 64 7B 76 2B 7D"** (v +)

Note 4: Once you have communications, you can use much the same command structure to get data back from the DM2 via the IP-50 interface.

To send data through to the system, to the DM2, we need to send special commands.

Network commands:

Use the following Hex commands:

•**vm** (to read the **temperature** sensor), Type **EE 64 7B 76 6D 7D** (the **76** and **6D** are "**vm**" in HEX).

• **vs** (to read the **status** of the system)= **EE 64 7B 76 73 7D** (the **76** and **73** are "**vs**" in HEX)

•**vp** (to turn the **power on/off**)=

○Type "**EE 64 7B 76 70 7D"** (the **76** and **70** are "**vp**" in HEX) The DM2 will turn "**ON"** the power to the SVX.

○Type "**EE 64 7B 76 6F 7D"** (the **76** and **6F** are "v0" in HEX) = The DisplayMark will turn "**OFF**" the power to the SVX.

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